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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/019,738	01/04/2002	James Quest	PZZ-001 (6119/P08785)	7380

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EXAMINER

WOZNIAK, JAMES S

ART UNIT	PAPER NUMBER
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2655

DATE MAILED: 11/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/019,738	Applicant(s) QUEST, JAMES	
	Examiner James S. Wozniak	Art Unit 2655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2002.
 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☐ Claim(s) _____ is/are allowed.
 6) ☒ Claim(s) 1-24 is/are rejected.
 7) ☐ Claim(s) _____ is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☒ The drawing(s) filed on 04 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. **Claim 13** is objected to because of the following informalities: "utterance/s" in line 8 should be changed to --utterances--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 1 and 13** are rejected under 35 U.S.C. 102(b) as being anticipated by Lyberg (*U.S. Patent: 5,806,033*).

With respect to **Claim 1**, Lyberg discloses:

Assigning first and second orders of signification to a word (*Col. 3, Line 38- Col. 4, Line 40*);

Wherein said first order of signification includes standardized indicators having agreed meanings independent of the speaker (lexical information, *Col. 3, Line 50- Col. 4, Line 3*) and said second order of signification includes variable indicators having meanings which are

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generated by the speaker and are dependent on the context of the word in the flow of connected speech (*syntactical and pitch related information within a sentence, Col. 4, Lines 1-40*).

With respect to **Claim 13**, Lyberg recites:

Assigning first and second orders of signification to a word (*Col. 3, Line 38- Col. 4, Line 40*);

Wherein said first order of signification includes words and language having standardized indicators having agreed meanings independent of the speaker (lexical information, Col. 3, Line 50- Col. 4, Line 3) and said second order of signification includes words and language possessing variable indicators signifying meanings, forms, functions, and structures which are generated by the speaker and are dependent on the context of the word in the flow of connected speech (*syntactical and pitch related information within a sentence, Col. 4, Lines 1-40*).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 2-7, 9-12, and 14-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lyberg in view of Minematsu (*U.S. Patent: 6,249,763*).

With respect to **Claim 2**, Lyberg teaches the analysis of a spoken language (Col. 3, Lines 56-64) and the speech recognition method as applied to claim 1, but does not specifically

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disclose the analysis of English, however Minematsu recites a means for performing speech recognition for spoken English (*Col. 7, Lines 50-55*).

Lyberg and Minematsu are analogous art because they are from a similar field of endeavor in language-based speech recognition. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Lyberg with the means for recognizing spoken English as taught by Minematsu in order to implement spoken English recognition by a non-native speakers to maintain a consistently high recognition rate (*Minematsu, Col. 2, Lines 13-32*).

With respect to **Claim 3**, Lyberg teaches assigning pitch, lexical and syntactic data to a spoken language (*Col. 3, Line 38- Col. 4, Line 40*).

With respect to **Claim 4**, Lyberg discloses performing speech recognition analysis utilizing pitch, syntax, and lexical information (*Col. 3, Line 38- Col. 4, Line 40*).

With respect to **Claim 5**, Minematsu additionally discloses:

Variable indicators include the pronunciation of phonemes, syllables, and words in the speech (*Col. 12, Lines 49-58; and Col. 13, Lines 13-39*).

With respect to **Claim 6**, Lyberg discloses:

Variable indicators include features of speech such as variations in pitch, tone, harmonic content, volume, duration, rhythm, tempo, and the rate of syllables spoken per unit time (*Col. 4, Lines 15-40*).

With respect to **Claim 7**, Lyberg teaches stressed and unstressed syllables (*Col. 4, Lines 15-40*, while Minematsu teaches variable pronunciations (*Col. 23, Line 12- Col. 24, Line 57; and Col. 13, Lines 1-27*).

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With respect to **Claim 9**, Lyberg teaches the use of syntactic analysis (*Col. 3, Line 39-Col 4, Line 13*).

With respect to **Claim 10**, Lyberg recites:

Syllables are categorized as being free syllables, protected syllables or restricted syllables (combinable stressed and unstressed syllables, Col. 3, Lines 50-66).

With respect to **Claim 11**, Minematsu additionally recites:

Recording speech spoken by a speaker (*Fig. 3, Element 150*);
Indicating to the speaker the meanings of the variable indicators of the recorded speech (*Col. 13, Lines 13-54*), and

Designating or affirming the meanings of the variable indicators indicated to the speaker (*Col. 15, Lines 31-38*).

With respect to **Claim 12**, Minematsu further discloses:

Storing data representative of analyzed words for which the meanings of the variable indicators have been designated or affirmed (*Col. 14, Lines 13-22*).

With respect to **Claim 14**, Lyberg recites:

Recording means for recording speech spoken by a user (*Col. 3, Lines 39-41*);
Means for assigning first and second orders of signification to a word (*Col. 3, Line 38-Col. 4, Line 40*);

Wherein said first order of signification includes standardized indicators having agreed meanings independent of the speaker (*lexical information, Col. 3, Line 50-Col. 4, Line 3*) and said second order of signification includes variable indicators having meanings which are

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generated by the speaker and are dependent on the context of the word in the flow of connected speech (*syntactical and pitch related information within a sentence, Col. 4, Lines 1-40*).

Lyberg does not specifically disclose a means for indicating to a user the meaning of variable indicators for affirmation, however Minematsu teaches such a means, as applied to Claims 11-12.

Lyberg and Minematsu are analogous art because they are from a similar field of endeavor in language-based speech recognition. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Lyberg with the means for indicator indication as taught by Minematsu in order to maintain a consistently high recognition rate by enabling a speaker to correct incorrectly recognized speech resulting from pronunciation variations (*Minematsu, Col. 2, Lines 13-32*).

With respect to **Claim 15**, Lyberg recites:

Recording means for recording speech spoken by a user (*Col. 3, Lines 39-41*);

Means for assigning first and second orders of signification to a word (*Col. 3, Line 38- Col. 4, Line 40*);

Wherein said first order of signification includes words and language having standardized indicators having agreed meanings independent of the speaker (lexical information, Col. 3, Line 50- Col. 4, Line 3) and said second order of signification includes words and language possessing variable indicators signifying meanings, forms, functions, and structures which are generated by the speaker and are dependent on the context of the word in the flow of connected speech (*syntactical and pitch related information within a sentence, Col. 4, Lines 1-40*).

Lyberg does not specifically disclose a means for indicating to a user the meaning of variable indicators for affirmation, however Minematsu teaches such a means, as applied to Claims 11-12.

Lyberg and Minematsu are analogous art because they are from a similar field of endeavor in language-based speech recognition. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Lyberg with the means for indicator indication as taught by Minematsu in order to maintain a consistently high recognition rate by enabling a speaker to correct incorrectly recognized speech resulting from pronunciation variations (*Minematsu, Col. 2, Lines 13-32*).

Claim 16 contains subject matter similar to Claim 4, and thus, is rejected for the same reasons.

Claim 17 contains subject matter similar to Claim 12, and thus, is rejected for the same reasons.

With respect to **Claim 18**, Lyberg discloses:

Assigning first and second orders of signification to a word (*Col. 3, Line 38- Col. 4, Line 40*);

Wherein said first order of signification includes standardized indicators having agreed meanings independent of the speaker (lexical information, Col. 3, Line 50- Col. 4, Line 3) and said second order of signification includes variable indicators having meanings which are generated by the speaker and are dependent on the context of the word in the flow of connected speech (*syntactical and pitch related information within a sentence, Col. 4, Lines 1-40*).

Lyberg does not specifically disclose the utilization of different variable indicators to practice speaking, however Minematsu teaches such utilization (*Col. 23, Line 12- Col. 24, Line 57; and Col. 13, Lines 1-27*).

Lyberg and Minematsu are analogous art because they are from a similar field of endeavor in language-based speech recognition. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Lyberg with the utilization of different variable indicators to practice speaking as taught by Minematsu in order to maintain a consistently high recognition rate by enabling a speaker to correct incorrectly recognized speech resulting from pronunciation variations (*Minematsu, Col. 2, Lines 13-32*).

Claim 19 contains subject matter similar to claim 3, and thus, is rejected for the same reasons.

With respect to **Claim 20**, Minematsu discloses a process for learning a correct word pronunciation (*Col. 23, Line 12- Col. 24, Line 57*).

With respect to **Claim 21**, Minematsu discloses analyzing different word pronunciations, which correspond to different speech vectors, using speech recognition (*Col. 13, Lines 1-27; and Col. 23, Line 12- Col. 24, Line 57*).

With respect to **Claim 22**, Minematsu discloses a method of learning the English language (*Col. 17, Lines 45-56*).

With respect to **Claim 23**, Minematsu discloses use of the English learning method by an American English speaker (*Col. 17, Lines 57-67*).

With respect to **Claim 24**, Minematsu discloses use of the English learning method by a Japanese speaker (*Col. 17, Lines 57-67*).

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6. **Claim 8** is rejected under 35 U.S.C. 103(a) as being unpatentable over Lyberg in view of Minematsu, and further in view of Kaye et al (*U.S. Patent: 5,623,609*).

With respect to **Claim 8**, Lyberg in view of Minematsu teaches the speech recognition method utilizing variable and standardized indicators, as applied to Claim 4. Lyberg in view of Minematsu does not specifically disclose the use of variable sound imagery, however Kaye teaches such sound imagery in linguistic cues based on pitch (*Col. 20, Line 10- Col. 22, Line 24; and Col. 7, Lines 31-59*).

Lyberg, Minematsu, and Kaye are analogous art because they are from a similar field of endeavor in language-based speech recognition. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Lyberg in view of Minematsu with the use of variable sound imagery as taught by Kaye in order to provide more computationally efficient speech recognition by utilizing linguistic cues in speech (*Kaye, Col. 2, Lines 49-60*).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Tsiang (*U.S. Patent: 5,377,302*)- teaches a method for speech recognition utilizing speech context and tone variation.

Lee (*U.S. Patent: 6,067,520*)- teaches a method for speech recognition utilizing tone and lexical data.

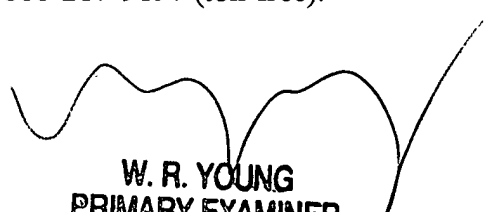
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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James S. Wozniak whose telephone number is (571) 272-7632. The examiner can normally be reached on M-Th, 7:30-5:00, F, 7:30-4, Off Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on (571) 272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James S. Wozniak
10/20/2005



W. R. YOUNG
PRIMARY EXAMINER